

The opinion in support of the decision being entered today  
is *not* binding precedent of the Board.

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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*Ex parte* NABIL ENRIQUE SALMAN,  
STEFANO MICHELE SINIGAGLIA, and ROBERT PAUL CASSONI

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Appeal 2007-0343  
Application 09/745,702  
Technology Center 3700

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Decided: September 12, 2007

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Before TERRY J. OWENS, JENNIFER D. BAHR, and  
LINDA E. HORNER, *Administrative Patent Judges*.

BAHR, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Nabil Enrique Salman et al. (Appellants) appeal under 35 U.S.C.  
§ 134 from the Examiner's decision rejecting claims 1 and 6-10. Claims 12-

20, the only other pending claims, have been withdrawn from consideration. We have jurisdiction over this appeal under 35 U.S.C. § 6 (2002).

Appellants' claimed invention is directed to a device for forming individually packaged articles from separated portions of tubular film (Specification 1:10-12). Independent claims 1 and 10 are representative of the claimed invention and read as follows:

1. A portable packaging device for individually packaging an article within a flexible tubular sheet, the device having an inlet end and an outlet end, and comprising:

a body formed by an inner core having an inlet opening and an outlet opening, and a passageway there between for passing there through an article to be packaged,

a casing comprising a surrounding casing wall, and a base wall that joins an end of the surrounding casing wall to the body, the body and the casing defining a storage space and a dispensing opening at the inlet end, wherein the device retains a length of a flexible tubular sheet within the storage space, wherein the tubular sheet is dispensed through the dispensing opening and into the inlet opening of the inner core, the article to be packaged is inserted through the inlet opening, and inside the tubular sheet, the tubular sheet is gathered and closed at each end to form a closed packaged article and the tubular sheet has an outer surface, the outer surface facing inward when the tubular sheet is passed through the inner core, the outer surface comprising an adhesive material, whereby a leading portion and a trailing portion of the tubular sheet are closeable on each side of article with the adhesive material, thereby forming the closed packaged article, and

a cutting blade positioned adjacent the outlet opening of the inner core, for cutting through a trailing portion of the tubular film to form the closed packaged article.

10. A portable packaging device for individually packaging an article within a flexible tubular sheet, the device having an inlet end and an outlet end, and comprising:

a body formed by an inner core having an inlet opening and an outlet opening, and a passageway there between for passing there through an article to be packaged,

a casing comprising a surrounding casing wall, and an base wall that joins an end of the surrounding casing wall to the body, the body and the casing defining a storage space and a dispensing opening at the inlet end, wherein the device retains a length of a flexible tubular sheet within the storage space, wherein the tubular sheet is dispensed through the dispensing opening and into the inlet opening of the inner core the article to be packaged is inserted through the inlet opening and inside the tubular sheet, the tubular sheet is gathered and closed at each end to form a closed packaged article and the tubular sheet has an outer surface, the outer surface facing inward when the tubular sheet is passed through the inner core, the outer surface comprising an adhesive material, whereby a leading portion and a trailing portion of the tubular sheet are closeable on each side of article with the adhesive material, thereby forming the closed packaged article, and wherein the shape of the outlet opening and a portion of the passageway are oval or elliptical; and

a cutting blade positioned adjacent the outlet opening of the inner core, for cutting through the

trailing portion of the tubular film to form the closed packaged article.

The Examiner relies upon the following as evidence of unpatentability:

Meissner	US 3,111,796	Nov. 26, 1963
Richards	US 4,869,049	Sep. 26, 1989
Hamilton	US 5,662,758	Sep. 02, 1997

Appellants seek review of the Examiner's rejection of claims 1 and 6-10 under 35 U.S.C. § 103(a) as unpatentable over Richards in view of Hamilton and Meissner.

The Examiner provides reasoning in support of the rejection in the Answer (mailed April 29, 2005). Appellants present opposing arguments in the Appeal Brief (filed March 31, 2005) and Reply Brief (filed June 29, 2005).

## THE ISSUES

In rejecting claims 1 and 6-9, the Examiner finds that Richards discloses the claimed subject matter, with the exception of adhesive material on the outer surface of the tubular sheet (Ans. 3). Appellants have contested this finding, arguing that Richards also lacks a cutting blade "positioned adjacent the outlet opening of the inner core, for cutting through a trailing portion of the tubular film to form the closed packaged article" (App. Br. 7). Although Appellants appear to have dropped that argument (Reply Br. 1), we will address it as an issue in this decision in the interest of completeness.

The Examiner contends it would have been obvious, in view of the teachings of Meissner and Hamilton, to modify Richards' tubular sheet by applying thereto an adhesive as taught by Hamilton providing an effective

closing and sealing, wherein a pressure sensitive adhesive is used to protect the tubular sheet material from inadvertent adherence to other surfaces (Ans. 4-5). Appellants argue Richards teaches away from the proposed modification (App. Br. 5) and that, in view of Richards' expressed objective to avoid complicated mechanical devices, the addition of adhesive via Meissner's complicated bubble forming and rupturing technique would contravene the intended purpose of Richards (App. Br. 7).

With respect to claim 10, the Examiner contends it would have been an obvious matter of design choice to make the outlet opening and a portion of the passageway in an oval shape, as the apparatus would perform equally well with the outlet opening of a circular shape (Ans. 5). Appellants contend that the oval or elliptical shape facilitates the use of the portable packaging device and, thus, is not merely ornamental and without mechanical functionality (App. Br. 11-12). In particular, Appellants point to page 3, lines 31-34, of their Specification (Substitute Specification, filed June 23, 2003), which states that it has been found that an outlet opening and at least a portion of the passageway of oval or elliptical shape can accommodate a human hand more readily than a circular shape (Reply Br. 2).

In light of the above contentions, the issues before us are:

1. whether Richards discloses or suggests a cutting blade positioned adjacent the *outlet* opening of the inner core, as called for in claims 1 and 10,
2. whether it would have been obvious to one of ordinary skill in the art at the time of Appellants' invention, in view of the combined teachings of Richards, Hamilton, and Meissner, to provide adhesive as

called for in the claims on the outer surface of Richards' tubular sheet,  
and

3. whether an oval or elliptical shape of the outlet opening and a portion of the passageway as called for in Appellants' claim 10 would have been an obvious variation of the circular opening and passageway shape of Richards' device.

### THE FACTS

Richards discloses an apparatus for using packs of flexible tubing in packaging a series of objects, such as babies' disposable diapers, respectively in individual packages along a length of such flexible tubing (Richards, col. 1, ll. 6-15). Of interest to Richards is solving the problems of hygienic and smell-free disposal of such objects. Richards recognizes a need to improve the hygiene, convenience and economy of these objects and to improve the suppression of or, if possible, the complete elimination of the smell. (Richards, col. 1, ll. 20-24.)

Richards' apparatus comprises a plastic container 21. A pack consisting of a tubular core 1 inside a circumferentially pleated length of flexible tubing 2 is located in the container 21. To begin using the pack to form a series of packages of objects, the top of the flexible tubing 2 is pulled upwards and tied into a knot 24 and pushed downward inside the core 1 to form the bottom of a package. An object is thrust well down into the core 1 and the package is closed by twisting the flexible tubing above the object as at 30. When it is desired to remove the packages from the bin portion 36 of the container, the uppermost package is severed above its upper twisted

closure 30 and the hinged base 53 of the bin is opened for removal of the packages through the end of the bin portion. (Richards, col. 3, ll. 4-54.)

Richards teaches that

[e]ven if the twisted seals between the packages become loosened, the lid and the newly formed topmost twisted seal will prevent the escape of odours, vapours and gases to the ambient atmosphere. However, it has been found that when the tubing 2 is made of high density polyethylene the twisted joints remain remarkably tight.

(Richards, col. 3, ll. 54-60.)

Richards discloses a severing means incorporated in the lid 31 (Richards, col. 3, l. 61 to col. 4, l. 22) but also teaches that "a cutter for severing the topmost package from the remainder of the flexible tubing can be provided beneath the pack location" (Richards, col. 5, ll. 2-4).

Meissner teaches application of adhesive within the open end of a container as an improvement to the common practice of merely closing the open end of the container as by folding or twisting and then fixing the same with a tape, cord or metal fastener to obtain a more secure and perhaps leakproof container (Meissner, col. 1, ll. 11-16 and 36-41).

The particular method of adhesive application disclosed by Meissner, as illustrated in Figs. 4 and 5, involves applying and expanding a gob 41 of film-forming material within the open end of a bag 45 to form a bubble 51 of desired size. The bag is then twisted at the area 53 within which the bubble 51 is located, thereby deforming the bubble 51 and progressively lining or coating the internal surfaces of the bag until the bubble ruptures. (Meissner, col. 5, ll. 43-52.)

Hamilton discloses the coating of flexible films with pressure sensitive adhesive for releasable sealing to a target surface, the flexible films having protrusions formed on an adhesive side which act to space a pressure sensitive adhesive from a target surface until the film is pressed against the target surface (Hamilton, col. 1, ll. 6-16; col. 3, ll. 51-61).

With respect to the shape of the passageway 25 and inlet and outlet openings 23 and 24, Appellants' Specification teaches:

The cross-sectional shape of the passageway 25, or the shape of either or both the inlet opening 23 and outlet opening 24, can be circular, or can be preferably oval or elliptical. It has been found that an outlet opening and at least a portion of the passageway that are oval or elliptical can accommodate the human hand more readily than a circular shape. The passageway can be cylindrical, wherein the axis along the passageway is a straight line, or elbowed, wherein the axis along the passageway is curved or non-linear. The selection of the shape and orientation of the passageway and openings can depend on design and aesthetic considerations of the use of the device.

(Specification 3:31 to 4:4.)

## DISCUSSION

Richards' teaching that a cutter for severing the topmost package from the remainder of the flexible tubing can be provided *beneath* the pack location, and thus adjacent the outlet opening of the core 1 of said pack, satisfies the limitation in claims 1 and 10 of a cutting blade positioned adjacent the outlet opening of the inner core.

We also conclude that the combined teachings of Richards, Meissner and Hamilton are sufficient to establish that it would have been obvious to

provide pressure sensitive adhesive, as taught by Hamilton, on the outer surface of pleated length of flexible tubing 2, which ultimately becomes the inner surface of the package after being pulled upward then pushed downward inside the core 1, in order to form a more secure and perhaps leakproof package. We do not agree with Appellants that Richards teaches away from such modification. "A reference may be said to teach away when a person of ordinary skill, upon [examining] the reference, would be discouraged from following the path set out in the reference, or would be led in a direction divergent from the path that was taken by the applicant." *In re Gurley*, 27 F.3d 551, 553, 31 USPQ2d 1130, 1131 (Fed. Cir. 1994). Simply that there are differences between two references is insufficient to establish that such references "teach away" from any combination thereof. *See In re Beattie*, 974 F.2d 1309, 1312-13, 24 USPQ2d 1040, 1042 (Fed. Cir. 1992). While Richards teaches that, when the tubing 2 is made of high density polyethylene, the twisted joints remain remarkably tight and that, even if the twisted seals between packages become loosened, the lid and topmost twisted seal will prevent the escape of odors, that would in no way discourage one of ordinary skill in the art from trying to further improve the device and safeguard against release of odors by providing a more secure or perhaps leakproof closure than by simply twisting, as suggested by Meissner.

When a work is available in one field of endeavor, design incentives and other market forces can prompt variations of it, either in the same field or a different one. If a person of ordinary skill can implement a predictable variation, § 103 likely bars its patentability. For the same reason, if a technique has been used to improve one device,

and a person of ordinary skill in the art would recognize that it would improve similar devices in the same way, using the technique is obvious unless its actual application is beyond his or her skill.

*KSR Int'l.*, 127 S.Ct. at 1740, 82 USPQ2d at 1396. We must ask whether the improvement is more than the predictable use of prior art elements according to their established functions. *Id.*

In this case, a person of ordinary skill in the art would have recognized, especially in view of the teachings of Meissner of using adhesive seals in combination with twisting to provide a more secure and leakproof closure and Richards' recognition of the desirability to suppress and, if possible, completely eliminate odors from objects such as soiled baby diapers, that the pressure sensitive adhesive technique taught by Hamilton would similarly improve the device of Richards. Further, the application of Hamilton's technique to the flexible tubing 2 of Richards would not have presented any unusual challenges to a person of ordinary skill in the art and would amount to no more than the predictable use of prior art elements according to their established functions.

Appellants' argument that the addition of adhesive via Meissner's complicated bubble forming and rupturing technique would contravene the intended purpose of Richards to avoid complicated mechanical devices is not well founded, as that is not the modification proposed by the Examiner. Rather, the modification proposed by the Examiner is to provide pressure sensitive adhesive in recesses, as taught by Hamilton, separated by protrusions to prevent premature sealing, on the outer surface of the length of tubing 2.

For the above reasons, Appellants' arguments do not demonstrate the Examiner erred in rejecting claims 1 and 6-9 as unpatentable over Richards in view of Hamilton and Meissner. The rejection is sustained as to these claims.

We, like the Examiner, also conclude that the use of an oval shape, rather than a circular shape, for a portion of the passageway and the outlet opening of Richards' pack would have been an obvious variation of Richards' device. While Appellants' Specification indicates an oval or elliptical shape can, at least for some sizes, accommodate the human hand more readily than a circular shape, the Specification also ultimately concedes that the particular shape selected will depend on design and aesthetic considerations of the use of the device.

When there is a design need or market pressure to solve a problem and there are a finite number of identified, predictable solutions, a person of ordinary skill has good reason to pursue the known options within his or her technical grasp. If this leads to the anticipated success, it is likely the product not of innovation but of ordinary skill and common sense. In that instance the fact that a combination was obvious to try might show that it was obvious under § 103.

*KSR Int'l.*, 127 S.Ct. at 1742, 82 USPQ2d at 1397. Ovals, ellipses, and circles are all standard and well-known geometric shapes whose attributes and implications are far too well established to present issues of unpredictability. We thus conclude that selection of any one of them depending on the design, footprint, and aesthetic considerations would have been well within the technical grasp of one of ordinary skill in the art and the

advantages afforded thereby would appear to be the product of ordinary skill and common sense rather than innovation.

In light of the above, Appellants' arguments do not demonstrate the Examiner erred in rejecting claim 10 as unpatentable over Richards in view of Hamilton and Meissner. The rejection is sustained.

#### SUMMARY

The decision of the Examiner to reject claims 1 and 6-10 is affirmed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a). *See* 37 C.F.R. § 1.136(a)(1)(iv) (2006).

#### AFFIRMED

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